

## REMARKS

Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 28-31 are pending. Claims 29-31 have been amended. Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 28 have been previously presented. Claims 1, 7, 10, 12, 13, 15, 16, 19, 21, and 24-27 have been canceled. No new matter has been introduced by this response.

### 1. Claim Rejections under 35 U.S.C. § 112

#### A. 35 U.S.C. § 112, First Paragraph

Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 29-31 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Applicants respectfully traverse these rejections based on the following remarks.

The Examiner asserts that "Applicants' specification, as originally filed, does not disclose that the stretched precursor film comprises a blend of biodegradable polymer resin and an etched water soluble polymer resin" (Office Action, page 2). The Examiner also asserts that "Applicants' specification does not provide support for etching the water soluble polymer resin prior to blending with the biodegradable polymer resin to form the precursor film" (Office Action, page 2). The Examiner additionally asserts that Applicants' specification, as originally filed, does not provide support for the claimed limitation that "the stretched precursor film has a stretched length of about 100% to about 500% and about 100% to about 300% of its original length" (Office Action, pages 2-3).

The Applicants' specification, however, discloses that:

After stretching, the water soluble polymer may be etched or dissolved by water for a desired time interval, preferably not less than one minute. The stretching procedure and etching of the water soluble component of the precursor film can be accomplished in *separate steps* with the etching step *following or preceding* the

stretching procedure. Specification, at page 14, lines 34-39;  
emphasis added.

In other words, the specification discloses that the water soluble polymer resin component can be etched before the biodegradable polymer resin and water soluble polymer resin in the precursor film are stretched and blended.

Also, the Applicants' specification explicitly discloses that:

Any uniaxial or biaxial stretching machine known in the art may be used to perform the stretching operation. The precursor film may be subjected to a plurality of stretching operations, such as uniaxial stretching or biaxial stretching to specified draw ratio. Stretching operations can provide a porous film with distinctive porous morphology, can enhance water vapor transport through the film, and can improve water access, and enhance degradability of the film. Preferably, the film is stretched from about *100 to about 500 percent of its original length*. More preferably, the film is stretched from about *100 to about 300 percent of its original length*. Specification, at page 13, lines 16-26; emphasis added.

In other words, Applicants' specification, as originally filed, provides support for the claimed limitation that the stretched precursor film has a stretched length of about 100% to about 500% and about 100% to about 300% of its original length.

In view of the above remarks, the Applicants respectfully submit that the rejections against claims 29 and 30, and thus the rejections against claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 31, which all depend from independent claim 29, are improper and should be withdrawn.

**B. 35 U.S.C. § 112, Second Paragraph**

Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 29-31 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicants respectfully traverse these rejections based on the following remarks.

Claims 29 and 30 have been amended to read “the stretched precursor film in the biodegradable film has a stretched length of about 100% to about 500% of its original length” and “the stretched precursor film in the biodegradable film has a stretched length of about 100% to about 300% of its original length”, respectively. The Applicants respectfully submit that amended claims 29 and 30 particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Accordingly, the rejections against amended claims 29 and 30, and thus the rejections against claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 31, which all depend from amended independent claim 29, have been overcome and should be withdrawn.

## **2. Claim Rejections under 35 U.S.C. § 103(a)**

### **A. 103(a) Rejections over Zhao in View of Wnuk And Topolkaraev**

Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 28-31 have been rejected under 35 U.S.C. § 103(a) over Zhao et al. (U.S. Pat. No. 6,514,602) in view of Wnuk et al. (U.S. Pat. No. 5,391,423) and Topolkaraev et al. (U.S. Pat. No. 5,800,758). The Applicants respectfully traverse these rejections based on the following remarks.

The Examiner has conceded that “the prior art does not appear to specifically teach that water soluble polymer resin is an etched water soluble polymer resin, and that the precursor film is a stretched precursor film having a stretched length of about 100% to about 500% and about 100% to about 300% of its original length” (Office Action, page 5). The Examiner, however, attempts to overcome this deficiency of the prior art by asserting that these claimed limitations “appear to be product by process limitations” and that “the article of the applied prior art ... is identical to or only slightly different than the claimed article” (Office Action, page 6). The Appellants respectfully disagree.

"Etched water soluble polymer resin" and "stretched precursor film" are structural limitations in that the etched water soluble polymer resin and the stretched precursor film import distinctive structural characteristics to the final product. "The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product." *In re Garner*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979); MPEP 2113. The court expressly held that "terms such as ... *"etched"* are capable of construction as structural limitations." *Id.*; emphasis added.

Here, the stretching operations "can provide a porous film with distinctive porous morphology, can enhance water vapor transport through the film, and can improve water access, and enhance degradability of the film" (see specification, page 13, lines 20-23; and pages 23-24, examples 6 and 7). The etching operations produce "[v]ery fine micro domain morphology of the film", and "observed improvement in breathability" (see specification, page 24, lines 3-24). Compared to articles prepared by a conventional method, the articles prepared employing the stretching and etching operations show "an improvement in breathability in the range of four times" (see specification, page 24, lines 23-24).

In view of the above, the Applicants respectfully submit that the "etched water soluble polymer resin" and the "stretched precursor film" limitations are structural limitations, which, as conceded by the Examiner, are not taught by the prior art. To the extent that prior art does not disclose these limitations, independent claim 29, and thus its dependent claims, are patentable.

The Examiner also asserts that "Topolkaraev teaches a method for making microporous films suited for use in gowns and diapers wherein the thermoplastic films are stretched while operatively contacted with a bath of a desired surface-active liquid" (Office Action, page 6). Topolkaraev, however, expressly teaches that its distinctive technique for

making a microporous film includes "a stretching of a *layer composed of a polymer material* and at least about 5 wt % of a particulate filler material" (see abstract; emphasis added). Topolkaraev does not teach or suggest making a stretched precursor film comprising a *blended mixture* of a biodegradable polymer resin and an etched water soluble polymer resin, as required by amended independent claim 29 (emphasis added).

The Examiner also asserts that "it is reasonable for one of ordinary skill in the art to expect that blending the biodegradable polymer resin and the water soluble polymer subsequent to etching would be substantially similar to a blended composition of biodegradable polymer resin and a water soluble polymer resin *without etching*" (Office Action, page 7; emphasis added). The Applicants respectfully disagree. First of all, the Examiner relies only on this conclusory statement, and fails to cite any authority to support this assertion. Further, as discussed in this section above, the etching and stretching operations provide distinctive structural characteristics compared to articles prepared by a conventional method without etching and stretching. Accordingly, the Applicants respectfully submit that one of ordinary skill in the art would appreciate that etching the water soluble polymer resin and then blending the biodegradable polymer resin followed by stretching would result in a different structure as the prior art.

The Examiner further asserts that "[s]ince the invention of the prior art is stretched while in contact with a solvent, the water soluble polymer resin of the prior art appears to be inherently etched" (Office Action, page 8). As discussed in this section above, etching is a separate step from stretching. Etching can occur prior to or subsequent to stretching. Accordingly, the Applicants respectfully submit that etching is not inherent in the stretching step.

In view of the above, the Applicants respectfully submit that Zhao in view of Whuk and Topolkaraev does not teach or suggest all the claimed limitation as recited in amended independent claim 29. Accordingly, the rejection against amended

independent claim 29, and thus the rejections against its dependent claims, should be withdrawn.

**B. 103(a) Rejections over Wu in View of Zhao, Wnuk, And Topolkaraev**

Claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 28-31 have been rejected under 35 U.S.C. § 103(a) over Wu et al. (U.S. Pat. No. 5,200,247) in view of Zhao, Wnuk, and Topolkaraev. The Applicants respectfully traverse these rejections based on the following remarks.

The Examiner has conceded that Wu does not teach “that the biodegradable polymer and water soluble polymers are resins”, and “that the prior art does not appear to specifically teach that water soluble polymer resin is an etched water soluble polymer resin, and that the precursor film is a stretched precursor film having a stretched length of about 100% to about 500% and about 100% to about 300% of its original length” (Office Action, pages 13 and 14). The Examiner, however, attempts to overcome this deficiency of the prior art by repeating the assertions made in connection with the rejections over Zhao in view of Wnuk and Topolkaraev (Office Action, pages 14-16).

However, as discussed in section 2A above, claims 2-6, 8, 9, 11, 14, 17, 18, 20, 22, 23, and 28-31 should be patentable over Zhao in view of Wnuk and Topolkaraev. Wu does not cure the deficiency of Zhao in view of Wnuk and Topolkaraev. Accordingly, the Applicants respectfully submit that Wu in view of Zhao, Wnuk, and Topolkaraev does not teach or suggest all the claimed limitation as recited in amended independent claim 29. Accordingly, the rejection against amended independent claim 29, and thus the rejections against its dependent claims, should be withdrawn.

**3. Conclusion**

Based on the above amendment and remarks, the Applicants respectfully submit that the claims are in condition for allowance. The Examiner is kindly invited to contact the undersigned agent to expedite allowance.

Respectfully submitted,

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